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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

02/22/2006

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EXAMINER

ETTEHADIEH, ASLAN

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/069,084	STEINER, ROLF	
	<b>Examiner</b>	<b>Art Unit</b>	
	Aslan Ettehadieh	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 – 7 have been considered but are moot in view of the new ground(s) of rejection necessitated by the applicant's amended claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boze (US 5416847) in view of Riazi et al. (US 6580705).
2. Regarding claim 1, Boze discloses method for correcting a measured signal transmitted through a system (col 1 lines 11 – 13 and col 3 lines 44 – 48, where the reduction of noise is being interpreted as correcting a signal), said method comprising: sampling said measured signal to yield a sampled signal sequence (col 4 lines 53 – 60; where the output of element 15 is being interpreted as a sampled signal sequence); windowing said signal series with a window function to yield a windowed signal series (col 13 line 62 – col 14 line 2; where output of the window function is being interpreted as a windowed signal series); and recalculating a corrected measured signal from said windowed signal series using information about a frequency-dependency of said system (col 13 line 58 – col 2 line 18). Boze does not disclose reproducing said sampled signal

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sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series

In the same field of endeavor, however, Riazi discloses reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences (col. 1 lines 23 – 25, 50 – 61, figures 1, 2; where signal is being interpreted as Boze's sampled signal sequences) and appending said plurality of copies to one another to yield a signal series (col. 2 lines 5 – 13, figures 1, 2; where a single combined signal is being interpreted as a signal series).

Therefore it would have been obvious to one skilled in the art at the time of invention was made to use reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series as taught by Riazi in the system of Boze to improve the quality of service for any signal transmission system that uses two or more different modulation schemes and to compensate for short term signal outages.

3. Regarding Claim 2, Boze further discloses wherein said recalculating a corrected measured signal from said windowed signal further comprises: transforming said windowed signal series from a time domain into frequency domain to yield a transformed signal series (figure 4 elements 75 and 87 and col 1 line 58 – col 2 line 18; where output of the window function is being interpreted as a transformed signal series); modifying said transformed signal series with a transfer function as a function of frequency of said system to yield a modified transformed signal series (col 1 lines 20 – 38, col 1 line 58 – col 2 line 18, col 14 lines 21 – 30, figure 4 elements 81, 89; where

output element 89 is being interpreted as a modified transformed signal series); re-transforming said modified transformed signal series back from said frequency domain into said time domain to yield a modified re-transformed signal series (figure 4 element 89; where output of element 89 is being interpreted as a modified re-transformed signal series), and receiving said corrected measured signal from said re-transformed signal series (figure 4 elements 89 and 73).

4. Regarding Claim 3, Boze further discloses wherein said recalculating a corrected measured signal from said windowed signal (figure 4 elements 75 and 87) signal further comprises modifying said corrected measured signal with a function inverse to said window function (figure 4 elements 89 and 73).

5. Regarding Claim 4, Boze further discloses wherein said receiving said corrected measured signal from said re-transformed signal series further comprises selecting a corrected signal sequence from said re-transformed signal series substantially corresponding to said sampled signal sequence (col 3 line 50 – col 4 line 2, col 13 line 53 – col 4 line 2, and col 8 lines 31 – 33).

6. Regarding Claim 5, Boze further discloses wherein said selected corrected signal sequence is selected substantially from a middle range of said re-transformed signal series (col 1 line 65 – col 2 line 2 and col 13 lines 62 – 68).

7. Regarding Claim 6, Boze further discloses wherein said sampling said measured signal is executed by a measuring device (Figure 4 element 15) at a highest accuracy provided by said measuring device (one skilled in the art at the time in the invention

would analyze the a/d converter of Boze would convert an analog signal to a digital signal by measuring the signal with a highest accuracy).

8. Regarding claim 7, Boze discloses a method for correcting a measured signal transmitted through a system (col 1 lines 11 – 13 and col 3 lines 44 – 48, where the reduction of noise is being interpreted as correcting a signal) having a transfer function as a function of frequency (col 1 lines 33 – 38), said method comprising: sampling said measured signal to yield a sampled signal sequence (col 4 lines 53 – 60; where the output of element 15 is being interpreted as a sampled signal sequence); windowing said signal series with a window function to yield a windowed signal series (col 13 line 62 – col 14 line 2; where output of the window function is being interpreted as a windowed signal series); transforming said windowed signal series from a time domain into frequency domain to yield a transformed signal series (figure 4 elements 75 and 87 and col 1 line 58 – col 2 line 18; where output of the window function is being interpreted as a transformed signal series); modifying said transformed signal series with a transfer function as a function of frequency of said system to yield a modified transformed signal series (col 1 lines 20 – 38, col 1 line 58 – col 2 line 18, col 14 lines 21 – 30, figure 4 elements 81, 89; where output element 89 is being interpreted as a modified transformed signal series); re-transforming said modified transformed signal series back from said frequency domain into said time domain to yield a modified re-transformed signal series (figure 4 element 89; where output of element 89 is being interpreted as a modified re-transformed signal series), and receiving said corrected measured signal from said re-transformed signal series (figure 4 elements 89 and 73).

Boze does not disclose reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series

In the same field of endeavor, however, Riazi discloses reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences (col. 1 lines 23 – 25, 50 – 61, figures 1, 2; where signal is being interpreted as Boze's sampled signal sequences) and appending said plurality of copies to one another to yield a signal series (col. 2 lines 5 – 13, figures 1, 2; where a single combined signal is being interpreted as a signal series).

Therefore it would have been obvious to one skilled in the art at the time of invention was made to use reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series as taught by Riazi in the system of Boze to improve the quality of service for any signal transmission system that uses two or more different modulation schemes and to compensate for short term signal outages.

9. Regarding claim 8, Boze discloses a method for providing a measured signal (output of element 15 of figure 4) for further processing, said method comprising: sampling said measured signal to yield a sampled signal sequence (col 4 lines 53 – 60; where the output of element 15 is being interpreted as a sampled signal sequence); processing said signal series to determine a characteristic of said measured signal (col. 1 line 20 – col. 2 line 18; where the use of the Fourier Analysis is used in processing signal(s) to determine a characteristic(s) of signal(s)). Boze does not disclose

reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series

In the same field of endeavor, however, Riazi discloses reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences (col. 1 lines 23 – 25, 50 – 61, figures 1, 2; where signal is being interpreted as Boze's sampled signal sequences) and appending said plurality of copies to one another to yield a signal series (col. 2 lines 5 – 13, figures 1, 2; where a single combined signal is being interpreted as a signal series).

Therefore it would have been obvious to one skilled in the art at the time of invention was made to use reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series as taught by Riazi in the system of Boze to improve the quality of service for any signal transmission system that uses two or more different modulation schemes and to compensate for short term signal outages.

10. Regarding claim 9, the method claimed as a software is nothing more than restating the function of the specific components of the method as claimed above and therefore, it would have been obvious, considering the aforementioned rejection for the method claim 1.

11. Regarding claim 10, the steps claimed as apparatus is nothing more than restating the function of the specific components of the method as claims above and



therefore, it would have been obvious, considering the aforementioned rejection for the method claim 1.

12. Regarding claim 11, the steps claimed as apparatus is nothing more than restating the function of the specific components of the method as claims above and therefore, it would have been obvious, considering the aforementioned rejection for the method claim 1.

13. Regarding Claim 12, Boze further discloses wherein said measured signal is a high speed (col 6 lines 60 – 61) digital pulse (col 2 lines 11 – 12).

14. Regarding Claim 13, Boze further discloses wherein said measured signal is a high speed (col 6 lines 60 – 61) digital pulse (col 2 lines 11 – 12).

15. Regarding Claim 14, Boze further discloses wherein said measured signal is a high speed (col 6 lines 60 – 61) digital pulse (col 2 lines 11 – 12).

16. Regarding Claim 15, Boze further discloses wherein said measured signal is a high speed (col 6 lines 60 – 61) digital pulse (col 2 lines 11 – 12).

***Other prior art cited***

The prior art made of record and not relies upon is considered pertinent to applicant's disclosure.

17. Harikumar et al. (US 6526105) discloses reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series (col. 5 lines 2 – 15).

18. Weerackody (US 5394435) discloses reproducing said sampled signal sequence to yield a plurality of copies of said sampled signal sequences and appending said plurality of copies to one another to yield a signal series col. 2 line 54 – col. 3 line 24).

19. Chu (US 5715319) discloses a system which digital inputs are fed to a window then to a fft then to an ifft then to window then outputted.

20. Kitayoshi (US 5519402) discloses a system that includes the following components: adc, window, fft and ifft.

21. Belotserkovsky (US 6628735) discloses a system receives and analog signal and then samples it, then applies windowing to it, then does an fft and outputs a correctly sampled signal.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a) necessitated by the applicant's amended claims.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

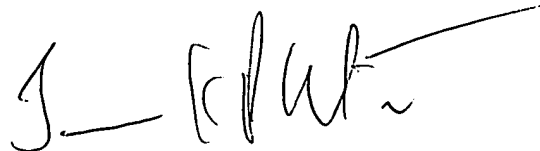
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aslan Ettehadieh whose telephone number is (571) 272-8729. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aslan Ettehadieh  
Examiner  
Art Unit 2637

AE

A handwritten signature in black ink, appearing to read 'J. K. Patel', with a long horizontal line extending from the end of the signature.

**JAY K. PATEL**  
**SUPERVISORY PATENT EXAMINER**